

In the claims:

Please cancel claims 1-21 without prejudice or disclaimer and add new claims 22-30.

Claim 1-21 (Canceled)

22. (New Claim) A method of diagnosing a disease comprising:

- (a) generating at least one fragmentation profile for at least one protein from a urine sample obtained from a subject; and
- (b) comparing said at least one fragmentation profile with a reference fragmentation profile for said at least one protein of a normal individual to determine the presence of disease.

23. (New Claim) The method of claim 22, wherein said disease results in the inhibition of protein fragmentation.

24. (New Claim) The method of claim 22, wherein said disease is a renal disease or a disease causing renal complications.

25. (New Claim) The method of claim 23 wherein the disease causing renal complications is bacterial infection, congenital defect, stones, allergy, or diabetes.

26. (New Claim) The method of claim 22, wherein the disease is a kidney disease.

27. (New Claim) The method of claim 23, wherein the inhibition is a result of lysosomal dysfunction.

28. (New Claim) The method of claim 22, wherein the disease is selected from the group consisting of nephropathy, diabetes insipidus, diabetes type I, diabetes II, renal disease, glomerulonephritis, bacterial glomerulonephritis, viral glomerulonephritis, IgA nephropathy, Henoch-Schönlein Purpura, membranoproliferative glomerulonephritis, membranous nephropathy, Sjögren's syndrome, nephrotic syndrome, minimal change

disease, focal glomerulosclerosis, acute renal failure, acute tubulointerstitial nephritis, pyelonephritis, GU tract inflammatory disease, Pre-clampsia, renal graft rejection, leprosy, reflux nephropathy, nephrolithiasis), genetic renal disease, medullary cystic, medullar sponge, polycystic kidney disease, autosomal dominant polycystic kidney disease, autosomal recessive polycystic kidney disease, tuborous sclerosis, von Hippel-Lindau disease, familial thin-glomerular basement membrane disease, collagen III glomerulopathy, fibronectin glomerulopathy, Alport's syndrome, Fabry's disease, Nail-Patella Syndrome, congenital urologic anomalies, monoclonal gammopathies, multiple myeloma, amyloidosis, febrile illness, familial Mediterranean fever, HIV infection - AIDS, inflammatory disease, systemic vasculitides, polyarteritis nodosa, Wegener's granulomatosis, polyarteritis, necrotizing, crescentic glomerulonephritis, polymyositis-dermatomyositis, pancreatitis, rheumatoid arthritis, systemic lupus erythematosus, gout), blood disorders, sickle cell disease, thrombotic thrombocytopenia purpura, hemolytic-uremic syndrome, acute cortical necrosis, renal thromboembolism, trauma, surgery, extensive injury, burns, abdominal and vascular surgery, induction of anesthesia, side effect of use of drugs, drug abuse, malignant disease, adenocarcinoma, melanoma, lymphoreticular, multiple myeloma, circulatory disease, myocardial infarction, cardiac failure, peripheral vascular disease, hypertension, coronary heart disease, non-atherosclerotic cardiovascular disease, atherosclerotic cardiovascular disease), skin disease, (psoriasis, systemic sclerosis), respiratory disease, COPD, obstructive sleep apnoea, hypoxia at high altitude, endocrine disease, acromegaly, diabetes mellitus, and diabetes insipidus.28. The method of claim 1, wherein the fragmentation profile is determined in terms of fragment size and sequence.

29. (New Claim) The method of claim 22, wherein a decrease in fragmentation of said at least one protein compared with the fragmentation of the said at least one protein from said normal individual, is indicative of said disease.
30. (New Claim) The method of claim 22, wherein the fragmentation profile is generated and/or compared to a reference fragmentation profile using chromatography, electrophoresis, sedimentation, or mass spectroscopy; or combinations thereof.

31. (New Claim) The method of claim 22, wherein the protein comprises albumin, globulin (α_1 -globulin(α_1 -globulin, α_2 -globulin), β -globulin γ -globulin), euglobulin, pseudoglobulin I and II, fibrinogen, α_1 acid glycoprotein (orosomucoid), α_1 glycoprotein, α_1 lipoprotein, ceruloplasmin, α_2 19S glycoprotein, β_1 transferrin, β_1 lipoprotein, immunoglobulins A, E, G, and M, horseradish peroxidase, lactate dehydrogenase, glucose oxidase, myoglobin, lysozyme, protein hormone, growth hormone, insulin, or parathyroid hormone.